

Appl. No. 09/484,549
Amdt. dated November 1, 2004
Reply to Office Action of July 30, 2004

Amendments to the Claims:

Please amend claims 15 and 16 to read as follows:

1. (Canceled)
2. (Previously presented): The method of claim 15 wherein a plurality of processors of the homogeneous multiprocessor environment are capable of executing a first instruction of a first instruction set and a second instruction of a second instruction set.
3. (Original): The method of claim 2 wherein the first instruction and the second instruction share an identical bit pattern but perform different operations.
4. (Original): The method of claim 3 wherein a first processor of the plurality of processors executes an input/output kernel program, the input/output kernel program including a first portion expressed using the first instruction set and a second portion expressed using the second instruction set.
5. (Original): The method of claim 3 further comprising the step of:
converting a functional program of the functional programs expressed using the first instruction set to an equivalent functional program expressed using the second instruction set.
6. (Previously presented): The method of claim 3 wherein the tasks comprise:
x86 processing;
graphic image processing;
video processing;
audio processing; and
communication processing.
7. (Original): The method of claim 3 further comprising the step of:
receiving the initial data from a first input/output device.
8. (Original): The method of claim 3 further comprising the steps of:
passing the resulting data to a first input/output device.

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9. (Original): The method of claim 8 wherein the step of passing the resulting data to the first input/output device further comprises the step of:

passing the resulting data through an intermediary device, wherein the intermediary device is coupled to the first input/output device and to a second input/output device.

10. (Original): The method of claim 9 wherein the step of passing the resulting data through an intermediary device, wherein the intermediary device is coupled to the first input/output device and to a second input/output device further comprises the step of:

automatically adapting to a reallocation of the available processing resources among the tasks.

11. (Original): The method of claim 8 wherein the step of passing the resulting data to a first input/output device further comprises the step of:

passing the resulting data to a mixed-signal device.

12. (Original): The method of claim 3 wherein the step of allocating the available processing resources among the tasks is dynamically adjusted.

13. (Canceled)

14. (Previously presented): The apparatus of claim 17 further comprising:
kernel program code configured to dynamically allocate the processing of the program code among the plurality of processors.

15. (Currently Amended) A method for providing multimedia functionality in a homogeneous multiprocessor environment comprising the steps of:

queuing tasks;

identifying available processing resources in the homogeneous multiprocessor environment;

allocating the available processing resources among the tasks based on the capabilities of each of the available processing resources and the processing requirements of each of the tasks;

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providing to the available processing resources functional programs and initial data
corresponding to the tasks; and
performing the tasks using the available processing resources to produce resulting data.

16. (Currently Amended) A method for providing multimedia functionality in a homogeneous multiprocessor environment comprising the steps of:

queuing tasks;
keeping track, remotely from the resources, of the capabilities of all available processing resources;
identifying available processing resources in the homogeneous multiprocessor environment based solely on the capabilities kept track of remotely;
allocating the available processing resources among the tasks based on the capabilities of each of the available processing resources and the processing requirements of each of the tasks;
providing to the available processing resources functional programs and initial data corresponding to the tasks; and
performing the tasks using the available processing resources to produce resulting data.

17. (Previously presented): An apparatus comprising:
a plurality of processors coupled to a bus;
an input/output interface coupled to the bus;
a plurality of input/output devices coupled to the input/output interface, the plurality of processors processing program code configured to perform a plurality of tasks, the program code comprising:
program code configured to cause a first portion of the plurality of processors to interact with a first input/output device of the plurality of input/output devices;
program code configured to cause a second portion of the plurality of processors to interact with a second input/output device of the plurality of input/output devices;
program code configured to cause a second portion of the plurality of processors to emulate a specific microprocessor instruction set;

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wherein the first portion of the plurality of processors provide functionality as found in a first application-specific subsystem and wherein the first input/output device is the first application-specific subsystem; and

wherein the second portion of the plurality of processors provide functionality as found in a second application-specific subsystem and wherein the second input/output device is the second application-specific subsystem.